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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,454	02/27/2004	Olexiy Ivchenko	UEI04-01	5180

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EXAMINER

CHEN, ALAN S

ART UNIT	PAPER NUMBER
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2182

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/789,454

Applicant(s)

IVCHENKO ET AL.

Examiner

Alan S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/20/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 35-45 in the reply filed on 11/9/2006 is acknowledged.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the it is hard to distinguish the details in the drawing and are not of a quality for public dissemination. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Objections

3. Claim 40 is objected to because of the following informalities: second line of the claim should reference a first communication "port" to be consistent with the second communication port. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 35-45 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat. Pub. No. 2002/0186245 to Chandhoke et al. (*Chandhoke*).

6. Per claim 35, Chandhoke discloses a data acquisition node (*Fig. 3A is the DAQ node*) comprising: a first circuit board supporting communications over a network (*Fig. 5, element 114, the DAQ card, also represented by the board in Fig. 6A; Paragraph 135 states DAQ board can be connected to network*); a second circuit board (*Fig. 5, element 134 the image acquisition card; Fig. 6A also represents the card, see Paragraph 135*), coupled to at least one of: i) an input device (*Fig. 2, element 132 and Paragraph 110 disclose is a camera being connected to the image acquisition card*), and ii) an output device (*Fig. 5, element 134, the image acquisition card is able to output data to the bus, element 170; Fig. 6A shows various devices on the board that operate as processing circuitry to enabling the output of data to the bus, element 208*); a connector interface (*Paragraph 143 disclose the interface cards are PCI or PXI standard compliant, which means the interface to the bus are via connectors/slots on a PCI or PXI backplane*) coupling multiple conductors of the first circuit board (*PCI and PXI both have multiple conductors*) to the second circuit board (*Fig. 5 clearly shows all the peripheral devices are communicable over the PCI/PXI bus, element 170*); and the first circuit board including a corresponding first programmable interface coupled to the multiple conductors (*Fig. 6A, programmable logic, element 206, enables interfacing the PCI/PXI local bus, element 208*), the second circuit board including a corresponding second programmable interface coupled to the multiple conductors (*Fig. 6A and Paragraph 135 disclose the card in Fig. 6A applies to both the image and DAQ cards and thus both have programmable interface capability*), configuration settings of the first programmable interface and the second programmable interface enabling

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conveyance of signals between the first circuit board and second circuit board (*FPGA interfaces local bus logic, e.g., programmable for PCI/PXI bus communications; Fig. 5 shows all peripheral devices can communicate over the bus, element 170*).

7. Per claim 36, Chandhoke discloses claim 35, further disclosing input device is a sensor device that monitors characteristics of a specific region in proximity to the data acquisition device (*Fig. 4, camera senses items near the acquisition node that has defects*).

8. Per claim 37, Chandhoke discloses claim 36, further disclosing the second circuit board forwards data over to the first board for transmission over the network (*Paragraph 135 discloses transmission over a network with the DAQ card*).

9. Per claim 38, Chandhoke discloses claim 37, further disclosing the second circuit board including an isolation circuit between the sensor device and the corresponding second programmable interface (*any of the processing shown in Fig. 6A, element 204, which sits between the input device over I/O connector 202 and the FPGA, element 206, can be construed to isolate the FPGA and camera*).

10. Per claim 39, Chandhoke discloses claim 35, further disclosing the output device is activated based on commands received over the network (*Paragraph 254 discloses image acquisition card can be controlled over the network using a GUI program*).

11. Per claims 41, Chandhoke discloses claim 35, further disclosing the first circuit board has upstream and downstream ports (*Fig. 6A, I/O connector is bi-directional, so is the bus interface, element 216*), wherein the upstream communications goes to a central control (*Fig. 6A, element 204*) and downstream communication is to other data acquisition nodes (*Fig. 2, shows the computer, element 82, is connected to a network of other nodes*).

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12. Per claims 42,44 and 45, Chandhoke discloses claim 35, wherein Chandhoke further discloses the devices in Fig. 5 working in synchrony in order to perform the detections in Fig. 4, e.g., detecting for defects; network control of the image acquisition card is performed over the network using a GUI (*Paragraph 254*).

13. Per claim 43, Chandhoke discloses claim 42, wherein the first circuit board receives communications over the network indicating how to program the first programmable interface and the second programmable interface (*Paragraph 254, portions of graphical program deployed into FPGA over network*).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patents and patent related publications are cited in the Notice of References Cited (Form PTO-892) attached to this action to further show the state of the art with respect to multiple data acquisition cards interconnected and having programmable interfaces.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASC
1/12/2007

Alan S. Elmer
1/12/07